

STATE WEATHER SERVICES.

A tabular summary of the more prominent climatological features of each State and Territory, as given in the reports for October by the directors of the respective State Weather Services, is presented in Table XII. This table gives for the whole area of any State: (a) the average departure from the normal values of the current monthly mean temperatures and total precipitations; (b) the maximum and minimum temperatures and precipitations; (c) the greatest and least monthly ranges of temperature occurring anywhere within the State. This table is essentially a summary of Table II, and therefore presents a somewhat different study of meteorological conditions from that given in Table I, which is based on regular Weather Bureau stations arranged in so-called climatic districts.

The following extracts are taken from the reviews published by the respective services; occasional notes in brackets are added by the Editor:

Alabama.—An almost entire absence of rain with pleasant weather prevailed throughout the month. The conditions were all that could be desired for harvesting; an abundance of sorghum was made, after which attention was generally given to gathering cotton, corn, and potatoes, and all crops were mostly in by the end of the month. It has been altogether a very good crop year. The absence of rain during most of October has caused very low rivers, and a general opinion prevails that they are the lowest since 1839; this condition has suspended traffic on the rivers.

Arkansas.—The weather was very favorable for gathering cotton and corn, but too dry for plowing, and at the end of the month rain was needed to give wheat a start before winter set in. Killing frosts occurred in all portions of the State, but they were rather beneficial as they caused cotton to open more rapidly.

Georgia.—The month was marked by no severe storms or abnormally sudden temperature changes.

Idaho.—The month opened with cloudy weather and showery conditions prevailing generally over the State. The second week ushered in a dry spell, the beginning of which was marked by killing frosts and freezing temperatures in all sections: the temperature then rose slowly until the 18th, when a sudden fall in temperature was generally reported, accompanied by heavy showers, with snow in some localities. The temperature remained nearly stationary, with a tendency to rise, until the 27th, when a colder period began and continued during the remainder of the month. Light scattered showers were the rule after the 21st.

Illinois.—In the first half of the month lower temperatures prevailed, but during the last half the daily means of temperature were in excess, except on the last two days. The weather throughout the month was favorable to growing crops and farm work, especially to the cribbing of corn, but the limited amounts of local rains caused a continuance of the scarcity of stock water on many farms and kept pasturage in localities in poor condition.

Kentucky.—The rainfall occurred chiefly during the closing days of the month, but was badly distributed and wholly insufficient. The drought was very severe and damaging to farmers and stock raisers, many having to haul water a very great distance for stock use.

Louisiana.—The dry weather was a continuance of the drought that began

about the middle of September, but coming after the heavy rains of preceding months, and in harvesting season, the benefits to matured crops were vastly greater than if more rain had fallen. Excellent corn, hay, and cotton harvests were made, and even cane was benefited, though more rain was needed in the sugar belt than fell during the month. What was required for the cane was colder nights and some rain to ripen the stalk and make it more juicy.

Missouri.—The first snow of the season occurred on the 29th. In a few of the central and southwestern counties, wheat and pastures were badly in need of rain at the close of the month, but over the greater portion of the State wheat was reported as looking well and pasturage was good. Water for stock was still scarce in some of the central and northern counties.

New England.—The temperature for the month averaged 1.8 above the normal. Damaging frosts occurred in valleys on several dates, but in many upland districts flowers are blooming in the open air and tomatoes, peas, etc., are found in the gardens untouched by frosts. Many of the northern stations report a slight deficiency in the rainfall, but there was a marked excess in the south and southeast. The fall has been generally sufficient for grass roots and for new seeded fields, and the pastures and fields are in much better condition than at the end of September; but, except in the extreme south, the wells and springs have not been filled up to any extent, and at the close of October much more rain is needed.

Oklahoma.—Temperature below 32°, with slight freeze, throughout the Territory on the 29th and 30th, but on account of absence of moisture little damage was done to vegetation. The month was practically free from storms or unusual phenomena. Light frosts on the 8th, 29th, and 30th. The average date of first killing frosts in this latitude is about October 20.

South Carolina.—The most salient feature of the weather for this month was the subtropical storm whose center passed over the south-central portion of the State during the 8th to 9th. Streams were swollen and overflowed their banks and flooded the low country swamps, but, as the storm occurred late in the crop season, the resulting damage was comparatively small. Probably the rice fields suffered most and bottom-land corn next, but the latter had abundant time to dry thoroughly before being gathered, as the weather was clear and without rain for nearly three weeks after the storm. The weather during the month was very favorable for gathering corn, cotton, and other late crops, and for seeding oats.

South Dakota.—The weather during the month was generally favorable for late farm work, and much plowing was done. The weather was generally unusually pleasant and mild.

Tennessee.—The early crop of tobacco was considerably below the average, while the late crop is considerably better. The early corn crop was the largest and best in years, but the late corn is much below the average. Cotton has done fairly well throughout the greater portion of the season, and the yield is said to be good. The drought which set in about the middle of September, and which is the longest and most severe of which there is any record, has been very detrimental to the farmers, as it has prevented them from preparing land for and seeding wheat. This, combined with the low prices, will considerably lessen the acreage of the next crop. Wells and streams are dry and stock water scarcer than ever known in many localities.

Wisconsin.—Killing frosts occurred on the 1st at many stations, and from that date the temperature slowly decreased, reaching the minimum on the 14th, on which date the temperature throughout the State was 5° to 10° below freezing. On the 16th it rose to 70° and above, reaching the maximum for the month on that date. The remaining days were warmer than usual for October. As a whole, the month was an average one for the State, though the number of gales on the lake was greater than usual, some of which were quite severe.

OBSERVATIONS ON THE GREAT LAKES.

REPORTS FROM U. S. LIFE-SAVING STATIONS.

Through the co-operation of the General Superintendent of the Life-Saving Service and the Secretary of the Treasury, the Weather Bureau has received monthly reports for the month of October, from the keepers of 32 U. S. Life-Saving Stations on the Great Lakes.

REPORTS FROM VESSELS.

The Lake Marine Section of the Forecast Division has received reports from the captains of 60 vessels navigating

the Great Lakes. The following miscellaneous items are extracted from their reports:

Capt. A. B. Drake, steamship *Thos. Maytham*, 16th, bright aurora nearly all night between Keweenaw Point and head of Lake Superior; 17th, bright aurora from midnight until 5 a. m., lower end of Lake Superior.

Capt. J. W. Morgan, steamship *Australasia*, 2d, northern Lake Superior, very bright aurora from 10.30 to 11.45 p. m.

Capt. J. L. Weeks, steamship *City of Genoa*, 16th, Lake Superior, northern lights from 10.30 p. m. to 2 a. m., 17th.

Capt. D. MacLean, steamship *City of Duluth*, 16th, Lake Michigan, northern lights observed at 10.15 p. m.

Capt. Edward Mooney, steamship *Wa-Wa-Tam*, 15th, Lake Superior, northern lights for fifteen minutes; Lake Huron, northern lights from 12.30 to 3 a. m.